1.9321 N2L692

LIST OF PUBLICATIONS

PROTEINS, AND RELATED SUBJECTS

THE NORTHERN REGIONAL RESEARCH LABORATORY , PEORIA, ILLINOIS

Bureau of Agricultural and Industrial Chemistry
Agricultural Research Administration
United States Department of Agriculture

- 1. Protein Plastics from Soybean Products: Relation of Water Content to Plastic Properties. A. C. Beckel, G. H. Brother, and Leonard L. McKinney. Ind. Eng. Chem., 30, 436-440 (1938).
- 2. Development of Soybean Protein as a Possible Base for Plastic Haterial. George H. Brother and Leonard L. Hekinney. British Plastics and Houlded Products Trader, 10, 113, 248-251 (1938).
- 3. Protein Plastics from Soybean Products: Action of Hardening or Tanning Agents on Protein Material. George H. Brother and Leonard L. McKinney. Ind. Eng. Chem., 30, 1236-1240 (1938).
- 4. Soybeans. Some Possibilities in the Production of Protein Plastic Haterial from Soybeans. George H. Brother and Leonard L. HcKinney. Hodern Plastics, 16, 1, 41-43, 70 (1938).
- 5. The Solubility of Some Constituents of Soybean Heal in Alcohol-Water Solutions. R. H. Nagel, H. C. Becker, and R. T. Milner. Cereal Chem., 15, 766-774 (1938).
- 6. Some Physical Factors Affecting the Dispersion of Soybean Proteins In Water. R. H. Nagel, H. C. Becker, and R. T. Milner. Cereal Chem., 15, 463-471 (1938).
- 7. Peptization of Soybean Proteins: The Effect of Neutral Salts on the Quantity of Nitrogenous Constituents Extracted from Oilfree Meal. Allan K. Smith, Sidney J. Circle, and George H. Brother. J. Am. Chem. Soc., 60, 1316-1320 (1938).
- 8. Peptization of Soybean Proteins: The Extraction of Nitrogeneus Constituents from Oil-free Heal by Acids and Bases with and Without Added Salts. Allan K. Smith and Sidney J. Circle. Ind. Eng. Chem., 30, 1414-1418 (1938).

^{1/} This list includes publications of the U. S. Regional Soybean Industrial Products Laboratory, Urbana, Illinois. Effective July 1, 1942, the chemical and engineering work of this Laboratory was transferred by Act of Congress to the Northern Regional Research Laboratory.

1939

- 9. Apparatus for Determining Moisture by the Distillation Method.
 A. C. Beckel, A. C. Sharp, and R. T. Milner. Ind. Eng. Chem.,
 Anal. Ed., 11, 425 (1939).
- 10. Casein Plastics (Chapter 7 of Casein and Its Industrial Applications. Sutermeister and Browne). New York. Reinhold Publishing Corporation. 1939.
- 11. Plastic Materials from Farm Products. George H. Brother. Ind. Eng. Chem., 31, 145-159 (1939).
- 12. Protein Plastics from Soybean Products: Plasticization of Hardened Protein Haterial. George H. Brother and Leonard L. McKinney. Ind. Eng. Chem., 31, 84-87 (1939).
- 13. The Dispersion of Protein in Aqueous Formaldehyde Solutions.
 Allan K. Smith, Herbert J. Max, and Philip Handler. J. Phys.
 Chem., 43, 347 (1939).
- 14. Soybean Protein: Precipitation from Water and Alkaline Dispersions by Acids and by Electrodialysis. Allan K. Swith and Sidney J. Circle. Ind. Eng. Chem., 31, 1234-1238 (1939).

- 15. Continual Observation of Changes in Weight at Oven Temperatures.

 An Apparatus for Use in Study of Drying Rates and in the Oxidation of Oil. A. C. Beckel and A. G. Sharp. Ind. Eng. Chem.,

 Anal. Ed., 12, 45-47 (1940).
- 16. A Method for the Determination of Nonprotein Mitrogen in Soybean Meal. H. C. Bocker, R. T. Milner, and R. H. Nagel. Gereal Chem., 17, 447-457 (1940).
- 17. Casein Plastics. George H. Brother. Ind. Eng. Chem., 32, 31-33 (1940).
- 18. The Development of Soybean-Phenolic Holding Plastics. George H. Brother and Leonard L. McKinney. Plastics, 4, 93-95 (1940).
- 19. Protein Plastics from Soybean Products. Influence of Phonolic Resins or Phonolic Molding Compounds on Formaldehyde-Hardened Protein Material. George H. Brother and Leonard L. McKinney. Ind. Eng. Chem., 32, 1002-1006 (1940).
- 20. Protein Plastics from Soybean Products. Laminated Material.

 George H. Brother, Leonard L. McKinney, and W. Carter Suttle.

 Ind. Eng. Chem., 32, 1648-1651 (1940).

1940 (Contid.)

- 21. Soybean Protein--Resumé and Bibliography. George II. Brother, Allan K. Smith, and Sidney J. Circle. U. S. Dept. Agr. Bul. ACE-62. 1940. Himeographed.
- 22. The Reaction of Formaldehyde with Amino Acids: X-ray Diffraction Patterns. Allan K. Smith, Philip Handler, and John Niel Ifrgudich. J. Phys. Chem., 44, 874-830 (1940).
- 23. Soybean Protein Dispersions in Formaldehyde Solutions. Preparation and Application. Allan K. Smith and Herbert J. Hax. Ind. Eng. Chem., 32, 411-415 (1940).

1941

- 24. Hoisture Content of Soybean Oil Heals. A. C. Beckel and T. H. Hopper. Ind. Eng. Chem., 33, 1448-1452 (1941).
- 25. A Study of the Moisture in Soybeans. A. C. Beckel and E. R. Earle. Ind. Eng. Chem., Anal. Ed., 13, 40-43 (1941).
- 26. A Simple Flexure Testing Machine for Plastics. G. H. Brother, W. C. Suttle, and L. L. McKinney. A.S.T.M. Bul., No. 109, 13-16 (1941).
- 27. The Effect of Formaldehyde on the Isoelectric Points of Some Proteins, Determined by Microelectrophoresis. Sidney J. Circle and Allan K. Smith. J. Phys. Chem., 45, 916-930 (1941).
- 28. Solvents for Zein. Primary Solvents. Cyril D. Evans and Ralph H. Manley. Ind. Eng. Chem., 33, 1416-17 (1941).
- 29. Soybeans in Plastics. Flow Properties of a Phenolic Type Plastic Modified with Formaldehyde-hardened Soybean Heal. L. L. McKinney and G. H. Brother. Modern Plastics, 18, 69-71 (1941).

- 30. Heat Denaturation of the Protein in Soybean Heal. A. C. Beckel, W. C. Bull, and T. H. Hopper. Ind. Eng. Chem., 34, 973-976 (1942).
- 31. Influence of Variety, Environment, Fertility Level on the Chemical Composition of Soybean Seed. J. L. Cartter and T. H. Hopper. U. S. Dept. Agr. Tech. Bul. 787. 1942.
- 32. Use of Soybean Heal in Plastics. L. L. McKinney. Soybean Digest, 2, No. 8, 4-5, 11. U. S. Dept. Agr. Bul. ACE-151 (RSHM-63). T942. Mimeographed.

1942 (Contid.)

- 33. The Critical Peptization Temperatures of Zein in Concentrated Ethyl Alcohol. Ralph H. Hanley and Cyril D. Evans. J. Biol. Chem., 143, 701 (1942).
- 34. Electrode Polarization in Dielectric Constant Heasurements.
 William G. Smiley and Allan K. Smith. J. Am. Chem. Soc., 64, 624-628 (1942).
- 35. Soybean Protein. Allan K. Smith. Soybean Digest 2, No. 9, 4-5. U. S. Dopt. Agr. Bul. ACE-152 (RSIII-64). 1942. Nimeographed.
- 36. Soybean Protein. Adhesive Strength and Color. Allan K. Smith and Herbert J. Max. Ind. Eng. Chem., 34, 317-320 (1942).

1943

- 37. The Effect of Variety and Environment on the Equilibrium Moisture Content of Soybean Seed. A. C. Beckel and J. L. Cartter. Cereal Chem., 22, 362-368 (1943).
- 38. Stabilizing Zein Dispersions Against Gelation. Cyril D. Evans and Ralph H. Manley. Ind. Eng. Chem., 35, 230 (1943).
- 39. Binary Solvents for Zein. R. H. Hanley and C. D. Evans. Ind. Eng. Chem., 35, 661 (1943).
- 40. Soybean-modified Phenolic Plastics. L. L. McKinney, Rudolph Deanin, Glen Babcock, and A. K. Smith. Ind. Eng. Chen., 35, 905-908 (1943).
- 41. Plasticized Films from Zein. United States Department of Agriculture. Bul. AIC-12. 1943. Himeographed.

- 42. Extending Phenolic Resin Plywood Glue with Corn Gluten and Soybean Meal. Glen E. Babcock and Allan K. Smith. U. S. Dept. Agr. Bul. AIC-65. 1944. Mimeographed.
- 43. A Bibliography on the Solvent Extraction of Vegetable Oils from Raw Haterials, with Special Attention to Soybeans. A. C. Beckel. Oil and Soap, 21, 264-270 (1944).
- 44. Alcohol Extraction Improves Soya Flour Flavor and Color. .. C. Beckel and A. K. Smith. Food Indus., 16, No. 8, 71, 119 (1944).

1944 (Cont'd.)

- 45. Soybean Protein Production—Comparison of the Use of Alcoholextracted with Petroleun-ether-extracted Flakes in a Pilot Plant.
 P. A. Belter, A. C. Beckel, and A. K. Smith. Ind. Eng. Chem., 36, 799 (1944).
- 46. Ternary Solvents for Zein! Cyril D. Evans and Ralph H. Manley. Ind. Eng. Chem., 36, 408-410 (1944).
- 47. Process for Extracting Prolamines. Ralph H. Hanley and Cyril D. Evans. U. S. Patent No. 2,354,393. U. S. Patent Office Off. Gaz. 631-632. July 25, 1944.
- 48. Plastic Composition! Ralph H. Hanley and Cyril D. Evans.
 U. S. Patent No. 2,357,839. U. S. Patent Office, Off. Gaz. 226.
 Sept. 12, 1944.
- 49. Soybean Chemistry and Technology. Klare S. Harkley and Warren H. Goss. Chemical Publishing Company, Inc. Brooklyn, N. Y. 261 pp. 1944.

- 50. Zein Fibers. Preparation by Wet Spinning. C. B. Croston, C. D. Evans, and A. K. Smith. Ind. Eng. Chem., 37, 1194 (1945).
- 51. Preparation of Zein by Precipitation Method. Cyril D. Evans, R. J. Foster, and C. Bradford Croston. Ind. Eng. Chem., 37, 175-177 (1945).
- 52. Sunflower and Safflower Seeds and Oils. R. T. Hilner, J. E. Hubbard, and Mary B. Wiele. Oil and Soap, 22, 304-307 (1945).
- 53. Soybeans: Certain Agronomic, Physical, Chemical, Economic, and Industrial Aspects. J. H. Shollenberger and W. H. Goss. U. S. Dept. Agr. Bul. AIC-74. 1945. Mineographed.
- 54. Protein Product and Process for Making Same. Allan K. Smith,
 Herbert J. Max, and Donald H. Wheeler. U. S. Patent No. 2,370,266.
 U. S. Patent Office, Off. Gaz. 509. Feb. 27, 1945.
- 55. Debittering Soybeans. List of Patents for Removing the Bitter Tasto from Soybeans. Allan K. Smith. U. S. Dept. Agr. Bul. AIC-73.

 1945. Himeographed. Also published in Soybean Digest, 5, No. 7, 25-26, 28 (1945).

1946

- 56. Soybean Protein Production. II. The Effect of Temperature and Mater-flake Ratio. A. C. Beckel, P. A. Belter, and A. K. Smith. Ind. Eng. Chem., 38, 731-734 (1946).
- 57. Laboratory Study of Continuous Vegetable Oil Extraction. Counter-current Extractor, Rising-film Evaporator, and Oil Stripper.

 A. C. Beckel, P. A. Belter, and A. K. Smith. Ind. Eng. Chem.,
 Anal. Ed., 18, 56-58 (1946).
- 58. Process for Prevention of Gelation of Solution of Dispersion of Prolamines. Cyril D. Evans and Ralph H. Manley. U. S. Patent No. 2,392,084. U. S. Patent Office, Off. Gaz. Jan. 1, 1946.
- 59. Preparation and Nitrogen Content of Soybean Protein. William G. Smiley and Allan K. Smith. Coreal Chem., 23, 288 (1946).
- 60. Soybean or Vegetable Hilk. Resume and Bibliography. A. K. Smith and A. C. Beckel. Chem. and Eng. News, 24, 54-56 (1946).
- 61. Linseed Protein. Alkali Dispersion and Acid Precipitation. A. K. Smith, V. L. Johnsen, and A. C. Beckel. Ind. Eng. Chem., 38, 353-356 (1946).
- 62. Proteins as Industrial Raw Materials. A. K. Smith. Chem. Indus., 58, No. 6, 974-977 (1946). Also published in the Soybean Digest, 7, No. 2, 14-13 (1946).

- 63. Extending Phenolic Resin Plywood Glue with Corn Gluten and Soybean Real. Glen E. Babcock and A. K. Smith. Ind. Eng. Chem., 39, 85-88 (1946).
- 64. Extending Resorcinol Resin Glue with Corn Gluten. Glen E. Babcock, and A. K. Smith. Modern Plastics, 24, 153, 250-256 (1947).
- 65. Solvent Effects on the Products of Soybean Oil Extraction. A. C. Beckel, P. A. Belter, and A. K. Smith. J. Am. Oil Chemists! Soc. In press.
- 66. The Nondistillation Alcohol Extraction Process for Soybean Oil.
 A. C. Beckel, P. A. Belter, and A. K. Smith. J. A. Oil. Chemists'
 Soc. In press.

1947 (Cont'd.)

- 67. Process for Obtaining Increased Yields in the Extraction of Corn Proteins. Cyril D. Evans and Chester W. Ofelt. U. S. Patent No. 2,414,195. U. S. Patent Office, Off. Gaz. 221. Jan. 14, 1947.
- 68. Acetylation of Zein Fibers. Cyril D. Evans, C. Bradford Croston, and C. H. Van Etten. Textile Research J., 17, 562-567 (1947).
- 69. Utilization of Soybean Heal in Holded Plastics. Leonard L.

 McKinney. U. S. Dept. Agr. Bul. AIC-150 (Supersedes ACE-151).

 1947. Mimeographed.
- 70. Soy Protein in Industry-What's Ahead. A. K. Smith. Soybean Digest, 7, 28-29 (1947).

